F.LE.1
Distinguish between situations that can be modeled with linear functions and with exponential functions.★
a. Show that linear functions grow by equal differences over equal intervals and that exponential functions grow by equal factors over equal intervals.
b. Recognize situations in which one quantity changes at a constant rate per unit interval relative to another.
c. Recognize situations in which a quantity grows or decays by a constant percent rate per unit interval relative to another.

F.LE.1 OH.2025.Q47

Which situation could be represented by an exponential function, $g(t)$, where t represents time in years?

Ⓐ A city's population increases by 300 people each year.

Ⓑ A checking account decreases by $150 in one year.

Ⓒ A car decreases in value by 17% in one year.

Ⓓ A house increases in value by 3% each year.

F.LE.1 OH.2024.Q32

Which situation represents exponential growth or decay?

Ⓐ The population of a town grows by 3% each year.

Ⓑ The population of a town grows by 200 each year.

Ⓒ The population of a town grows by 3% one year, then decreases by 3% the next year.

Ⓓ The population of a town grows by 200 one year, then decreases by 200 the next year.

F.LE.1 OH.2019.Q2

Which situation describes a quantity that increases by a constant percent rate?

Ⓐ The size of one photo is 15% larger than the size of another photo.

Ⓑ The number of plants in a pond is 85% of the number from the previous year.

Ⓒ The population of one city is 85% greater than the population of another city.

Ⓓ The number of magazine subscribers each year is 15% greater than the previous year.

F.LE.1 OH.2017.Q13

Some values for a function are shown in the table.

x	$f(x)$
0	0
2	25
3	50

Which statement best describes the function?

Ⓐ It is linear because $f(x)$ increases by a constant amount compared to x.

Ⓑ It is linear because $f(x)$ increases by a constant percentage compared to x.

Ⓒ It is not linear because $f(x)$ does not increase by a constant amount compared to x.

Ⓓ It is not linear because $f(x)$ does not increase by a constant percentage compared to x.